8304 Pasted

Network Working Group
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The Use of 'Set Data Type' Transaction in File Transfer Protocol

As mentioned in RFC 265, the opcode of 'ØØ' is set aside for the 'set data type' control transaction. This discussion is intended to to clarify the use of 'set data type' in file transfer operations.

In many systems such as Multics at MIT, there is no provision to identify the type of data (i.e., ASCII or numeric) stored in files. The manner in which the data is handled is context dependent. ASCII characters are stored as four 9-bit characters per 36-bit word, right justified with left most bit as zero. As efficient conversion programs exist in Multics for conversion of data from Multics' ASCII into Network ASCII, it would be useful for a user to be able to instruct the Multics server to convert data into Network ASCII in retrieve operations. It is suggested that the 'set data type' transaction be used for this purpose.

The 'set data type' transaction preceding a retrieve request should be interpreted by a server to mean that the user wants to receive his data in that form. If the server is unable to convert the data into the desired form, it should return a 'set data type' of 'ØØ', indicating data to be bit-stream (i.e., no conversion).

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The following examples should clarify the use of 'set data type' transactions.

```
1.        USER                                                SERVER
                Set data type 'Ø2' (Network ASCII)
                ------------------------------------------>
                Store File X
                ------------------------------------------>
                File X (in Network ASCII)
                ------------------------------------------>
                End of File
                ------------------------------------------>
                Acknowledge
                <------------------------------------------

                Retrieve File X
                ------------------------------------------>
                File X in Network ASCII
                <------------------------------------------
                End of File
                <------------------------------------------

2.        USER                                                SERVER
                Set data type 'Ø3' (EBCDIC)
                ------------------------------------------>
                Retrieve File Y
                ------------------------------------------>
                Set data type 'ØØ' ("bit-stream")
                <------------------------------------------
                File Y as stored (no conversion)
                <------------------------------------------
                End of file
                <------------------------------------------

                Set data type 'Ø2' (Network ASCII)
                ------------------------------------------>
                Retrieve File Z
                ------------------------------------------>
                File Z in Network ASCII
                <------------------------------------------
                End of File
                <------------------------------------------
```